

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 30. This sheet, which includes Fig. 30, replaces the original sheet including Fig. 30.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application as currently amended and in view of the following remarks is respectfully requested.

Claims 1-44 are currently pending in the application. Claims 1, 3, 4, 5, 9, 10, 14, 18, 22, 23, 27, 34, 36, 38, and 43 have been amended by the current amendment.

In the outstanding Office Action, Claims 3, 4, 5, and 38 have been objected to; Claims 1-4, 7, 9-12, 14-17, 20-25, 27, 28, 34, and 35 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,154,246 to Ogasawara et al.; Claims 5, 18, and 29-33 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogasawara et al. in view of U.S. Patent No. 6,498,617 to Ishida et al.; Claims 6, 8, 19, 36, 37, 43, and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogasawara et al. in view of U.S. Patent No. 4,694,156 to Swanberg; and Claims 38-42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogasawara et al. in view of Swanberg and Ishida et al.

Claims 13 and 26 have been objected to as being dependent upon a rejected base claim, but have been indicated as being allowable if rewritten in independent form.

Applicants acknowledge with appreciation the indication of allowable subject matter.

However, because Applicants believe that they are entitled to the scope of protection defined by the independent claims as currently amended, Claims 13 and 26 have been maintained in their original form.

In response to the objections to Claims 3, 4, 5, and 38, those claims have been amended as recommended in the Office Action. Consequently, no further objection is anticipated.

Applicants have made amendments to the specification in order to address informalities discovered therein. No new matter has been added.

Likewise, Applicants have submitted a replacement sheet reflecting changes to Figure 30. In particular, the word "pixel" was misspelled in the original Figure 30. No new matter has been added.

Briefly recapitulating, the present invention (Claims 1 and 14) is directed to an image forming apparatus configured to adjust an image write-in clock. The image forming apparatus includes a generator configured to generate load data and a phase set signal; a first frequency divider which generates and outputs an image clock which is synchronized with an output of a photodetector by dividing a clock output by a frequency dividing number selected based on the data loaded by the generator; and an image clock phase changing circuit which changes a phase of the image clock based on the phase set signal. The phase set signal enables the phase of the image clock to be delayed by $1/8$ of a clock unit. By performing the phase delay of $1/8$ a clock cycle, the frequency of the image clock can be finely adjusted. Moreover, utilization of load data enables fine tuning by advancing or reducing the clock by a ratio based on the loaded data. See the specification at page 61, line 15 - page 62, line 14.

Similarly, the present invention (Claims 9 and 22) defines an image forming apparatus including a phase change circuit which changes a timing when the image data input circuit takes in the image data and a phase of the image clock based on the phase set signal.

Claims 27 and 34 are directed to an image forming apparatus including a plurality of light emitting parts each configured to output a light flux; and a clock phase control circuit which controls a phase of an output pixel clock so as to correct a shift in the write start position in a scanning direction due to a shift in a position of each light emitting point of the plurality of light fluxes.

Likewise, Claims 36 and 43 are directed to an image forming apparatus including a plurality of light emitting parts each configured to output a light flux; and a clock phase control circuit which controls a phase of an output pixel clock for each of a plurality of

deflecting surfaces of a deflector so as to correct a fluctuation in a scanning length corresponding to the plurality of deflecting surfaces.

The Official Action asserts that Ogasawara et al. disclose an image clock phase changing circuit which changes a phase of the image clock. Applicants point out, however, that Ogasawara et al. fail to teach or suggest that the frequency dividing circuit 35 divides a clock output by a frequency dividing number selected based on load data loaded by a generator. Consequently, Ogasawara et al. do not teach a system wherein fine tuning can be accomplished by increasing or decreasing the frequency dividing number. Further, none of the applied art remedies the deficiency of the Ogasawara et al. patent.

Consequently, Ogasawara et al. are not believed to anticipate or render obvious the subject matter defined by Claims 1-26.

Regarding Claims 27-44, Applicants respectfully submit that neither Ogasawara et al. nor Swanberg teach or suggest an image forming apparatus including a plurality of light emitting parts each configured to output a light flux and a clock phase control circuit which controls a phase of an output pixel clock which is synchronous with the plurality of light fluxes. Swanberg merely discloses using a polygon mirror to scan an image and discusses generally how to manage phase control issues. However, Swanberg fails to teach or suggest a system including a plurality of light emitting parts each configured to output a light flux. Consequently, none of the applied art addresses the problems associated with a multi-beam optical system.

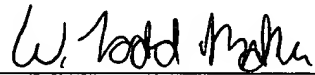
For the foregoing reasons, Ogasawara et al. are not believed to anticipate or render obvious the subject matter defined by Claims 27-44 when considered alone or in combination with Swanberg.

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Consequently, no further issues are believed to be outstanding, and the application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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